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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,543	11/26/2003	John R. Wootton	2/1206US	9738
22822	7590	08/10/2007		
LEWIS, RICE & FINGERSH, LC			EXAMINER	
ATTN: BOX IP DEPT.			RIDLEY, BASIA ANNA	
500 NORTH BROADWAY				
SUITE 2000			ART UNIT	
ST LOUIS, MO 63102			PAPER NUMBER	
			1764	
			MAIL DATE	
			DELIVERY MODE	
			08/10/2007	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/723,543

Applicant(s)

WOOTTON ET AL.

Examiner

Basia Ridley



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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20040102, 20040913</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Invention II, claims 18-26 in the reply filed on 23 May 2007 is acknowledged.

Information Disclosure Statement

2. The information disclosure statement filed on 2 January 2004 fails to comply with the provisions of 37 CFR 1.98(b) for the reasons set forth below. It has been placed in the application file, but the following document(s) referred to therein has/have not been considered as to the merits:
 - "Fuel Reforming" - as it is not identified by publisher; author (if any), relevant pages of the publication, date, and place of publication;
 - "Methods of Converting/Extracting Hydrogen" - as it is not identified by publisher, author (if any), relevant pages of the publication, date, and place of publication;
 - "What is a Fuel Cell" - as it is not identified by publisher, author (if any), relevant pages of the publication, date, and place of publication;
 - "Supercritical Oxidation of Toxic Military Materials: Current Status" - as it is not identified by publisher, relevant pages of the publication, date, and place of publication;
 - "Supercritical Water Oxidation State-Of-The-Art Environmental Technology" - as it is not identified by publisher, author (if any), relevant pages of the publication, date, and place of publication.
3. The information disclosure statement filed 2 January 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent

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literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the following document(s) referred to therein has/have not been considered as to the merits:

- "Methods of Converting/Extracting Hydrogen";
- "What is a Fuel Cell".

4. The following documents, 5,386,055 and 5,516,952, cited in the information disclosure statement filed on 2 January 2004 have been already submitted and considered as part of the information disclosure statement filed on 13 September 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokari et al. (US 2003/0168381) in view of Wright et al. (USP 5,141,823).

Regarding claims 18-28 Hokari et al. discloses a system comprising hydrocarbon and water feeds; a supercritical water (SCW) reactor; further including an oxygen feed into the SCW reactor; further comprising a sensor' and control system for monitoring at least one of said syntheses gas and said output gas and adjusting said feeds based on said sensing (see for example [0005]-[0018] and [0031]).

While the reference teaches that the produced combustible gas can be used for energy generation, it does not disclose another means of using said combustible gas for energy

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generation, namely using it in a fuel cell. Since to use combustible gas resulting from hydrocarbon reforming in a fuel cell was well known in the art at the time of the invention, as evidenced by Wright et al. (see for example abstract), it would have been obvious to one having ordinary skill in the art at the time of the invention to use said generated combustible gas of Hokari et al. in the fuel cell of Wright et al., as doing so would have amount to nothing more than to use a known material for its intended use, in a known environment to accomplish an entirely expected result. Further examiner notes that an apparatus is not patentable where it is an obvious combination of two known elements, wherein each element lends to end products the desirable properties that each is known to produce when used alone and there exists no evidence of co-action between the elements that produces unexpected results. See *In re Fortess and Schoeneberg*, 152 USPQ 13 (CCPA 1966).

Wright additionally discloses that to use combustible gas in a fuel cell, the system needs to include a water-gas shift reactor (C5/L62-68 and C7/L50-65) and a capturing system to temporarily store that hydrogen gas before supplying it to the fuel cell (C1/L54-C2/L5).

Regarding limitations recited in claims 18-28 which are directed to a manner of operating disclosed system, neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP § 2114 and 2115. Further, process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim."

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6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

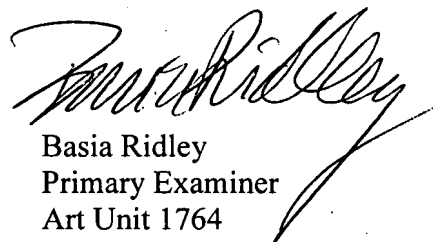
Conclusion

7. In view of the foregoing, none of the claims are allowed.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (571) 272-1453.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Technical Center 1700 General Information Telephone No. is (571) 272-1700. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).


Basia Ridley
Primary Examiner
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BR
August 6, 2007